

REMARKS

Reconsideration of the above-identified application in view of the present amendment is respectfully requested. By the present amendment, claims 2-5 and 7-10 have been cancelled. Claim 1 has been amended. Claims 11-15 have been added. The specification has also been amended to correct a minor informality in the Abstract. Claim 10 has been cancelled to overcome the objection to the drawings.

The indication that claims 4-5 and 7-9 would be allowed if rewritten in independent form and including all the limitations of the base claim and any intervening claims, is acknowledged with appreciation. Claim 11 is claim 4 rewritten in independent form. Claim 12 is claim 5 which now depends from claim 11. Claim 13 is claim 7 rewritten in independent form. Claim 14 is claim 8 which now depends from claim 13. Claim 15 is claim 9 which now depends from claim 14. Thus, claims 11-15 should be allowed.

Claim 1 has been amended to include the limitations of claims 2 and 3. Claim 1 has been rejected under 35 U.S.C. §103(a) as being obvious over Ernst et al. (German Patent No. DE 28 09 395) in view of Gorman et al. (U.S. Patent No. 5,934,596). To establish obviousness of a claimed invention, the prior art references when combined, must teach or suggest all the claim limitations. In addition, there must be some suggestion or motivation to a person having ordinary skill in the art to modify the reference (MPEP §706.02(j)).

Claim 1 is patentable over the combination of Ernst et al. and Gorman et al. The combination does not teach or suggest a belt retractor for a vehicle occupant restraint system according to claim 1.

Claim 1 is directed to a belt retractor for an occupant restraint system comprising a frame and a belt spool. As seen in figure 2 of the drawings, the belt spool 18 has a pair of flanges 20, 22 and is rotatably mounted in the frame 12. A wheel member 24 is mounted on the flange 22 of the belt spool 18 and an external tothing is formed on the flange 22. The flange 22 has a larger outer diameter than the wheel member 24 so that it extends radially beyond the wheel member 24. A locking pawl 30 is mounted on the frame 14 for selective engagement with the external tothing of the wheel member 24. The locking pawl is biased into an engaged position and is movable by means of a solenoid 34 into an inactive position out of engagement with the external tothing of the wheel member 24. The locking pawl 30 bears laterally on both sides, namely on one side of the pawl on the flange 22 and on the side of the pawl facing away from the flange 22 on the frame 12. Thus, the belt retractor according to the present invention has the advantage that, in case of load, the locking pawl is only subjected to pressure and not to detrimental shear stresses.

The patent to Ernst et al. shows a belt retractor for an occupant restraint system comprising a frame 1 and a belt spool 2 being rotatably mounted in the frame (figure 1). The belt spool comprises a flange 6 with an external tothing 7.

A locking pawl 10 is pivotally mounted on the frame for selective engagement with the external toothing 7. The locking pawl is biased into an engaged position and is movable by means of a solenoid 12 into an inactive position out of engagement with the external toothing 7 of the flange 6.

The patent to Ernst et al. does not disclose the feature that, in addition to the flange, a wheel member is provided which is mounted on the flange and is provided with an external toothing. Thus, the patent to Ernst et al. also does not disclose a flange extending radially beyond a wheel member. Further, the locking pawl according to Ernst et al. is pivotally mounted on the frame, but it does not bear laterally both on the flange and on the frame on a side of the pawl facing away from the flange of the belt spool.

Gorman et al. shows a belt retractor for an occupant restraint system comprising a frame 22 and a spool 28 having a pair of flanges 32 and 34 (figure 1). The belt retractor further comprises a torsion bar 44 having a wheel member 48 with an external toothing 62. As can be seen in figure 1, the torsion bar 44 is intended to be inserted through apertures 26a, 26b provided in the frame 22 and through a through-bore 36 provided in the spool 28. Thus, after insertion of the torsion bar 44, the wheel member 48 is located outside the frame 22. A locking pawl 60 is pivotably supported on a post 64 extending from a wall 24a of the frame 22 for selective engagement with the external toothing of the wheel member.

Since the locking pawl 60 is mounted on the exterior of the frame 22 and the belt spool 28 with the pair of flanges 32, 34, is arranged in the interior of the frame, Gorman et al. does not show a locking pawl which bears laterally both on a flange of a belt spool and on a frame of the belt retractor on a side of the pawl facing away from the flange. Thus, as the combination of Ernst et al. and Gorman et al. does not show or suggest a locking pawl which bears laterally both on a flange of a belt spool and on a frame of a belt retractor, claim 1 should be allowed.

Claim 6 depends from claim 1 and is patentable over the prior art for the same reasons as claim 1 and for the specific limitations recited therein. None of the prior art, either along or in combination, disclose or suggest that a laterally projecting armature plate of ferromagnetic material is rigidly connected to the locking pawl and including all the limitations of claim 1. Thus, claim 6 should be allowed.

Attached hereto is a marked-up version of the changes made to the abstract and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

In view of the foregoing, it is respectfully submitted that the above identified application is in condition for allowance, and allowance of the above-identified application is respectfully requested.

Serial No. 09/836,763

Please charge any deficiency or credit any overpayment in
the fees for this amendment to our Deposit Account
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Respectfully submitted,

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